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ABSTRACT

The effect on anxiety of a behaviorally-oriented treatment, Anxiety Management Training (AMT), was investigated with a sample of college students (N=23). The treatment was based upon the techniques originally used by Richardson, Suinn, and Meichenbaum, and consisted of three principal elements: relaxation training, cognitive-restructuring, and imaginal rehearsal. General anxiety levels were characterized by tension, vulnerability to stress, and free-floating apprehension. In addition to the general anxiety levels, changes in two identifiable types of anxiety were assessed: overt as related to specific environmental events, and covert as related to personality traits not always recognized. Subjects were randomly assigned to either of two treatment groups or to a waiting-list control group. A pre- and post-test experimental design was utilized, and anxiety was assessed by a standardized questionnaire. Independent variables included the treatment and the therapists; dependent variables were general anxiety level, overt anxiety, and covert anxiety. Findings suggested that the treatment was successful in lowering the mean general anxiety scores of the two treatment groups. As predicted, the treatment groups' overt anxiety scores declined to a greater extent than their covert anxiety scores. (Author)

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THE EFFECT OF ANXIETY MANAGEMENT TRAINING ON COLLEGE STUDENTS' GENERAL, OVERT, AND COVERT ANXIETY

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THE EFFECT OF ANXIETY MANAGEMENT TRAINING ON COLLEGE STUDENTS' GENERAL, OVERT, AND COVERT ANXIETY

This study sought to evaluate the effectiveness of a behavioral treatment methodology on the general, free-floating anxiety of college students. More specifically, the study investigated whether Anxiety Management Training (AMT) was an effective method for reducing high levels of anxiety among students at a medium sized liberal arts college. The influence of the treatment upon two types of anxiety, overt and covert, was also assessed. In addition, the study attempted to verify that any effect toward lowering anxiety was directly attributable to the treatment rather than solely to therapist effectiveness.

Through reviewing previous research, a clearer picture of the definition, symptoms, and types of anxiety was developed. Anxiety is characterized by tension, vulnerability to stress, and free-floating apprehension (Cattell & Scheier, 1961; Wolpe, 1973). The symptoms of anxiety are cognitive, affective, physiological, and behavioral. Anxiety is related to learning difficulties, phobic reactions, excessive worry, hypertension, ulcers, performance fears, and poor interpersonal skills (Gaudry & Spielberger, 1971; Krug, Scheier, & Cattell, 1976; Wolpe, 1973). Two identifiable types of anxiety exist: overt, which is related to specific environmental events; and covert, which is unrealized and personality trait related (Cattell, 1966).

The review of previous research suggested that most effective approaches to anxiety reduction were variants of behavior therapy (Goldfried & Trier, 1974; Meichenbaum, 1977; Richardson, 1976). The most frequently utilized treatment methods included progressive relaxation, cognitive-restructuring, and

covert rehearsal. Progressive relaxation is a method of training clients to systematically relax the muscles of the body while learning to attend to the feelings associated with both tension and relaxation (Bernstein & Borkovec, 1973).

Cognitive-restructuring is a therapy method aimed at modifying feelings and behaviors by influencing the client's self-evaluations, attributions, and patterns of thought (Lazarus, 1977; Meichenbaum & Turk, 1976). Imaginal or covert rehearsal is a technique whereby clients imagine themselves participating in previously anxiety-arousing experiences and performing more competently, effectively and calmly (Meichenbaum, 1977).

Anxiety management training is a method that employs all three of the above treatment methods in a counterconditioning paradigm to teach self control of anxiety. Developed by Suinn and Richardson (1971), AMT utilizes elements of progressive relaxation, cognitive-restructuring, and systematic desensitization. The treatment strategy employs (a) using instructions and cues to arouse clients' anxiety responses, and (b) training the client in developing competing responses such as relaxation, success imagery, and ideas of competency (Richardson, 1976).

Methodology

The present research study sought to answer the following questions in regard to the behaviorally-oriented treatment called AMT:

1. Is there any difference in the effectiveness of the treatment resulting from therapist differences?
2. What effect does the treatment have on students' general anxiety levels?
3. What effect does the treatment have on overt anxiety relative to its effect on covert anxiety?

The study utilized a pre- and post-test experimental design. Each of the two treatment groups, which met for four, one and a half hour sessions, was led by a different therapist but closely followed the same treatment outline. The participants were tested using the IPAT Anxiety Scale (Cattell, 1976). It is a brief, objective, self-administrable, 40 item questionnaire for the assessment of general anxiety level. The IPAT also provides measures of overt and covert anxiety.

The subjects in the study were 23 college students whose ages ranged from 19 to 47 with a median age of 22. Of the 23 students in the study, 21 were undergraduates and two were graduate students. The students were all volunteers who desired to participate in a program designated as Anxiety Management. The participants were randomly assigned to either of two treatment groups or to a waiting-list control group. The most frequently expressed anxiety complaints were test-taking and performance concerns such as public speaking and translating aloud in language classes.

AMT group one was composed of 7 students and had a mean general score of 39.71 (SD = 8.52) on the pre-test. AMT group two, which was made up of 6 students, had a mean pre-test score of 30.67 (SD = 8.76). The waiting-list control group had 10 students with a mean score of 36.00 (SD = 7.59) on the pre-test. Table 1 shows the means and standard deviations of the three groups on the pre-tests as well as post-tests.

To determine whether the students who volunteered for the study had higher anxiety levels than a non-volunteer student group, an Educational Psychology class of 25 was also tested. The mean score of this group was 23.76 (SD = 8.85), establishing that the volunteer clients had as expected, higher anxiety levels than their peers.

Treatment. AMT is a counterconditioning technique that uses cues and instructions to arouse anxiety while training clients to develop responses that compete with anxiety. Participants were first taught the general principles of AMT and then taught the specific methods of progressive relaxation. Clients were asked to visualize an anxiety arousing situation, a scene that they associated with relaxation, and a scene where they competently cope with anxiety. Because the objective was for participants to become aware of the onset of anxiety early enough to begin to utilize competing responses, they were trained to pay close attention to the physiological and cognitive cues that accompany the subjective experience of anxiety.

Next, participants were guided through practice in relieving anxiety aroused by visualizing scenes with moderate and high level stressors. Muscle relaxation, breathing control, competency-success imagery, cognitive-restructuring, and imagination of pleasant relaxing scenes were used as coping responses. During the third and fourth sessions, participants in both groups underwent anxiety induction and anxiety control procedures four times per treatment session. Finally, clients were encouraged to practice relaxation and other coping skills *in vivo*, as well as to begin utilizing these new skills in anxiety arousing situations. The goal was for participants to be able to substitute competent, coping responses for anxiety reactions in formerly stressful situations.

Results

Table 1 reports that the results of several t-tests that compared the pre- and post-test means of each group independently. AMT group one experienced a decline in general, covert, and overt anxiety levels. These reductions in anxiety scores are presented in terms of the difference between means and were

5.71 (SD = 3.86, $p < .01$); 2.29 (SD = 1.70, $p < .01$); and 3.43 (SD = 3.60, $p < .05$), respectively.

Similarly, AMT group two also experienced comparable declines in mean anxiety scores. The results for this group were 6.67 (SD = 6.89, $p < .05$) for the general score; 1.67 (SD = 4.27) for the covert score; and 5.00 (SD = 3.16, $p < .01$) for the overt score. No significant changes in mean general, covert, or overt scores were found for the waiting-list control group. These results suggest that the AMT treatment was effective in reducing the client's general anxiety scores.

The changes in overt and covert anxiety levels were also examined over the course of the treatment. Overt anxiety, by its nature and relationship to environmental events, was expected to decline compared to the personality trait-related covert anxiety. In order to make this comparison, two new variables, overt gain and covert gain, were created. These variables consisted of the combined mean group differences between the pre- and post-test means of the 13 treated clients.

As reported in Table 2, the gain in covert scores was -2.00 and the gain in overt scores was -4.15. The change was in the predicted direction and the greater decrease was, as expected, shown by the overt score. Comparison of the differences between means yielded a t value of 2.12 ($p < .05$). Thus, the prediction that the treatment would result in greater reductions in overt than covert anxiety was proven. These results suggest that the AMT treatment was effective in reducing both types of anxiety.

Discussion

One of the shortcomings in previous research on the effectiveness of AMT was the failure to control for therapist effectiveness. Whereas these earlier studies had a single therapist performing the treatment, the present study

compared the results of groups treated by two therapists. However, the results failed to confirm that the relative effectiveness of a therapist could be separated from the effectiveness of the treatment. Thus, it remains to be determined whether AMT has a treatment effect that can be separated from therapist effectiveness.

A number of studies reported successfully employing variants of AMT in college settings in various parts of the country (Edie 1973; King, 1974; Mendonca & Siess, 1976; Nicoletti, 1973; Suinn & Richardson, 1971). The present study found results comparable to these studies that utilized similar college student populations. Like the earlier studies, the present study determined that college students' anxiety levels could be reduced as a result of a brief, intensive, behaviorally-oriented group treatment. Using a local population, students' general overt, and covert anxiety declined significantly when measured after a two week treatment employing relaxation, cognitive-restructuring, and imaginal rehearsal.

A conceptual distinction has been made between anxiety as a transitory emotional state and as a relatively stable personality trait. Several earlier studies suggested that covert or trait anxiety would be more resistant to treatment than overt or state anxiety (Johnson & Spielberger, 1968; Zuckerman, 1972). However, other researchers have suggested that state and trait anxiety differed somewhat unpredictably within populations and as a result of treatment conditions (Bendig, 1960; Shedletsky & Endler, 1974). The present study determined that although both overt and covert anxiety declined as a result of the treatment, overt anxiety demonstrated a significantly greater decline.

In summary, the experiment determined that AMT was effective in reducing anxiety among the study participants. Caution should be exerted, however, when attempting to generalize the results beyond the sample employed in the study.

It was reported that the results of the present study were similar to the results of previous studies that used variants of AMT in comparable populations. Also, in an area where previous research had made somewhat conflicting conclusions, additional clarification was provided in regard to how overt and covert anxiety responded to a brief treatment.

FOOTNOTES

[1]This paper was presented at the American Personnel and Guidance Association Convention, March 1980. The data was a part of the author's doctoral dissertation sumbitted to the Counselor Education Department, University of South Carolina, Columbia, SC 29208.

[2]Reprints or additional information can be requested from Michael L. Vinson, Counseling Psychologist, Counseling Center, Clemson University, Clemson, SC 29631.

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Table 1

Means, Standard Deviations, and Differences Between Means for the AMT Treatment Groups and the Waiting-List Control Group

Group	IPAT Scale	Pre-Test M	Pre-Test SD	Post-Test M	Post-Test SD	Differences Between Means	SD	t
AMT I (n = 7)	General	39.71	8.52	34.00	7.59	5.71	3.86	3.92**
	Covert	19.39	3.35	17.00	3.74	2.29	1.70	3.55**
	Overt	20.43	5.53	17.00	4.97	3.43	3.60	2.52*
AMT II (n = 6)	General	30.67	8.76	24.00	11.88	6.67	6.89	2.37*
	Covert	14.50	4.55	12.83	5.81	1.67	4.27	.96
	Overt	16.17	4.36	11.17	6.31	5.00	3.16	3.87**
Waiting-List (n = 10)	General	36.00	7.59	35.30	8.71	.70	7.72	.29
	Covert	17.30	4.22	17.80	3.43	-.50	4.20	-.38
	Overt	18.70	4.03	17.70	6.24	1.00	4.71	.67

*$p < .05$
**$p < .01$

Table 2

Comparison of Covert and Overt Gain Scores

for AMT Combined Groups

Variable	n	M	SD	Difference Between Means	SD	df	t
Covert Gain	13	-2.00	3.03	2.15	3.67	12	2.12*
Overt Gain	13	-4.15	3.36				

*$p < .05$